

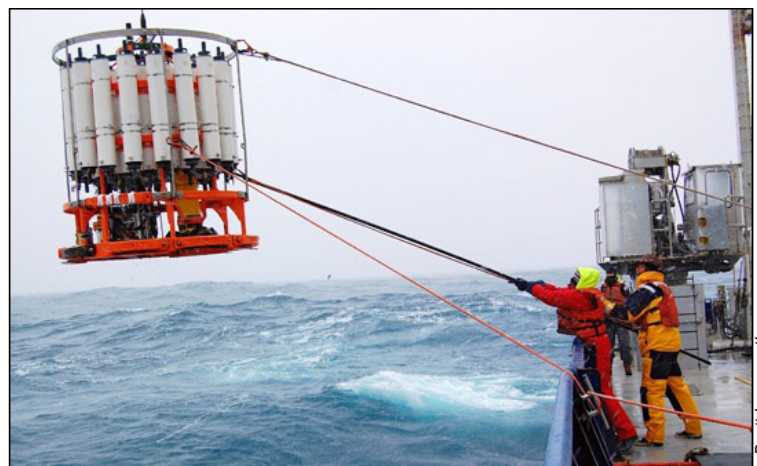
Office of Oceanic and Atmospheric Research (OAR)

CLIMATE PROGRAM OFFICE

Understanding and describing climate variability and change to enhance society's ability to plan and respond...

NOAA is a leading provider of climate, weather, and water information and services to the nation and the world. Established in October 2005, the Climate Program Office manages the competitive research program by which NOAA funds high-priority climate science to advance understanding of atmospheric, oceanic, land-based, and snow and ice processes, and how they affect climate. This research is conducted in most regions of the United States, at national and international scales, and globally.

NOAA's Climate Program Office also provides strategic guidance and oversight for the agency's climate science and services programs. These programs build knowledge of climate variability and change, and how they affect our health, our economy, and our future. Recognizing that climate touches almost every aspect of society, increased emphasis is being placed on leveraging the agency's climate science data and information resources for use in sustained programs that help people better plan and respond.



Brett Longworth

Crew members aboard the NOAA Ship Ronald H. Brown retrieve samples from the frigid waters of the Southern Ocean. As the device is lowered into the ocean, instruments measure salinity, temperature, and depth. Each white bottle collects seawater at different depths for detailed analysis.

Recent Accomplishments

NOAA co-sponsored with NASA and National Science Foundation a six-week cruise to the Southern Ocean on the NOAA Ship Ronald H. Brown to study what controls the rate of exchange of carbon dioxide (and other gases) between the atmosphere and the ocean in this region. The world's ocean plays an important role in absorbing carbon dioxide released to the atmosphere from human activity. Some models predict that carbon dioxide absorption is decreasing in the Southern Ocean, but there have been very few studies measuring these exchanges. Findings from the cruise will help improve the accuracy of climate models and predictions.

NOAA launched the National Integrated Drought Information System (NIDIS) Drought Portal, on-line at www.drought.gov. Drought is a "creeping" natural disaster that blankets about one-third of the United States at any given time. NOAA also awarded a five-year grant to the University of Oklahoma and Louisiana State University to establish a new Regional Integrated Sciences and Assessments (RISA) team focused on drought in six states. These new programs provide tools and resources for local and regional community managers to use in their long-range planning to develop more drought-resilient communities. They provide the public with easy access to useful, user-friendly drought information.



Gary McManus

What was once wheat field in Cimarron County, OK, resembled a desert in June 2008. NOAA's new RISA and NIDIS Programs are helping farmers to better prepare for adverse climate impacts.

Climate Program Office and Climate Mission Goal <http://www.cpo.noaa.gov/>

Email: oar.cpo.office@noaa.gov

Recent Accomplishments (continued)

The Argo Array portion of the Global Ocean Observing System reached its initial design goal of 3,000 active floats globally. Through the Climate Program, the U.S. leads worldwide efforts to monitor the global ocean. Argo floats provide subsurface measurements of ocean temperature and salinity that are needed to validate satellite-based altimeter measurements, and to enable scientists to monitor global sea level change and changes in the ocean's heat storage. NOAA's Climate Program is the only Federal organization dedicated to sustaining an ocean climate observing system—without this observing system, there could be no seasonal or decadal climate forecasts.

Google.org, the philanthropic arm of the Internet search company, awarded the International Research Institute (IRI) for Climate and Society \$900,000 to help weather, climate, and health experts in Africa to better predict and prevent outbreaks of climate-related infectious diseases. Established as a cooperative agreement between NOAA's Climate Program Office and Columbia University, the IRI actively leverages funds from government and non-governmental organizations to support societal service programs in developing nations. Through improved use of weather and climate forecasts, rainfall data, and other resources, the IRI will work with local experts to develop sustainable methods for mapping where and when infectious disease outbreaks are likely to occur.

What's next for NOAA's Climate Program Office?

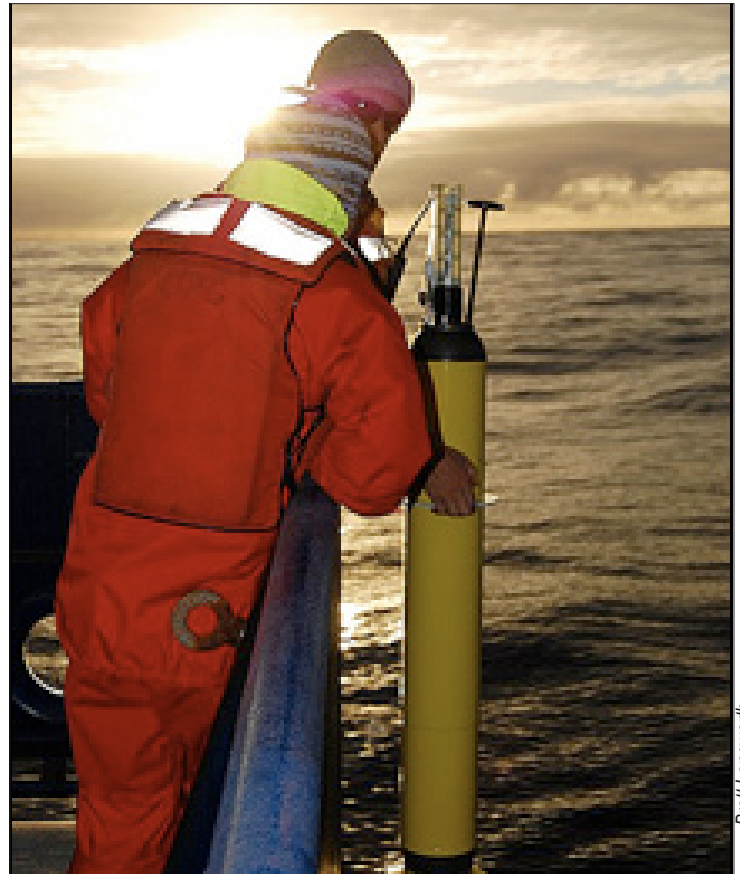
In the coming year, the Climate Program Office will expand its role in building a sustained climate service for the Nation. This climate service will develop resources to support decision makers and inform societal stakeholders of potential climate-related impacts, areas of vulnerability, and potential adaptation strategies.

The Climate Program Office has established productive relationships with the U.S. Department of Energy to enhance both agencies' ability to model the climate system. A goal is to model the ocean at finer resolutions of space and time and to better understand how it influences climate, and how oceanic changes affect coastal and living marine resources.

Other Climate Program Office goals for 2009:

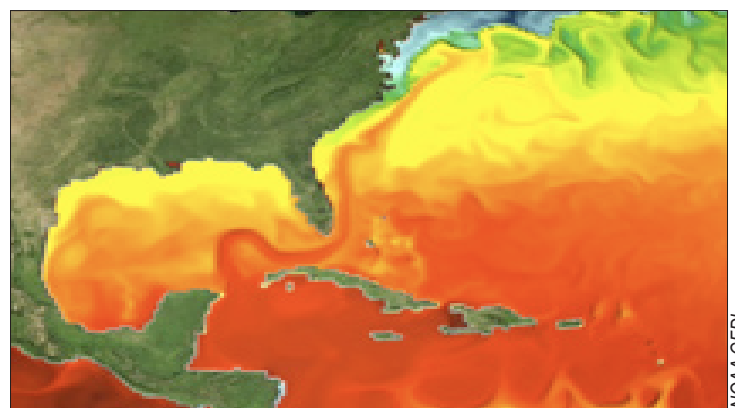
- sustain the global ocean climate observing system and use the resulting data to support climate research and to advance climate models;
- improve short-term climate models, and leverage them for decision-support on regional scales and among key socio-economic sectors; and

- monitor the processes governing water vapor in the upper troposphere and lower stratosphere to improve atmospheric models.

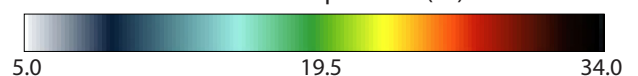


Brett Longworth

Scientists launching an Argo float from the stern of the RV Roger Revelle at 62 degrees South latitude in the Southern Ocean. NOAA reached its initial goal of deploying 3,000 active units in its global Argo Array in 2008.



Sea Surface Temperature (°C)



This image shows simulated sea surface temperature patterns produced by NOAA's Geophysical Fluid Dynamics Laboratory's high-resolution coupled atmosphere-ocean model. Such simulations help scientists better understand the climate system and predict climate variations.